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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,323	11/10/2003	Nelson D. Abbey III	1-37123	4473

43935 7590 04/27/2005

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EXAMINER

CRANE, DANIEL C

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/705,323	ABBEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Daniel C Crane	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/8/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

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## **BASIS FOR REJECTIONS**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

## **DRAWING OBJECTION**

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature where the first conduit means couples a source of fluid pressure to the first driver so as to cause expansion of the bushing between the tapered surface of the spindle and the hollow bore of the forming roll must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

## **REJECTION OF CLAIMS ON FORMAL MATTERS**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2, 3, 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Failure to provide details for the first conduit means that couples a source of fluid pressure to the first driver so as to cause expansion of the bushing between the tapered surface of the spindle and the hollow bore of the forming roll results in an inadequate disclosure.

## **REJECTION OF CLAIMS OVER PRIOR ART**

Claims 1-3, 5-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Luckhof (5,800,088). See Figure 1 where the “expandable bushing” 15 is installed by a first driver 10 that engages the segments 14a-d by application of pressure by driver face 10 through port 11 and removed by second driver 10 that engages segments 14a-d by claw 13 through the application of pressure from port 12. The tapered bushing 15 is expandable and contractible by virtue of the press fitting between the roll 1 and the tapered shaft 3. Any deformation resulting from the pressing operation will cause the bushing to expand or contract to a degree.

Claim 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luckhof (5,800,088) in view of anyone of Fukui (5,647,685), Svensson (5,190,393) or Aarre (5,538,356). Luckhof illustrates the claimed invention as treated supra. However, Luckhof does not show an expandable bushing generally cylindrical and provided with a plurality of parallel spaced apart slots. However, this type of bushing is known in the prior art as evidenced by Fukui at 20. Such an expandable bushing facilitates superior frictional gripping between the roll and the spindle. Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Luckhof's expandable bushing 15 by providing a slotted bushing as shown by Fukui to facilitate frictional gripping between the roll and the spindle. Similarly, Svensson and Aarre show expandable bushings engageable with the roll and the tapered spindle. Such a modification to Luckhof's device would have been obvious so as to facilitate improved gripping between the roll and spindle.

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Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by either one of Svensson (5,190,393), Aarre (5,538,356) or Naab (2,835,518). Svensson shows an expandable bushing 4 positioned between a tapered spindle 2 and a roll (unlabeled). See column 1, lines 42-58, of Svensson. As to Aarre, see the Figures where the expandable bushing 5 is constructed from segments that facilitate the expansion and contraction of the bushing 5 against the tapered spindle 3 and the roll 1. Naab shows that the roll 24 is attached to the taper spindle 25 by an expandable sleeve 26 that can be expanded by fastener 27 and contracted by a fastener inserted in threaded hole 36.

Claims 1, 4, 5 and 8 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Yatsuzuka (4,817,410) in view of either one of Naab (2,835,518) or Aarre (5,538,356). As illustrated in Figure 1 of Yatsuzuka, a tapered spindle is coupled to a roll 104 by a tapered sleeve 102. The sleeve 102 is pressed between the roll and spindle. Yatsuzuka does not show that the sleeve is "expandable" is provided with a first and second driver for expanding the sleeve and contracting the sleeve. Naab and Aarre this provision, thus, facilitating ease of assembly and ease of disassembly while providing a secure joint between a tapered spindle and a hollow member. Accordingly, it would have been obvious to the skilled artisan at the time of the invention to have modified Yatsuzuka's spindle connection by using a connection as taught by either one of Naab or Aarre for the noted motivation.

#### **PRIOR ART CITED BY EXAMINER**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

#### **RESPONSE BY APPLICANT(S)**

Applicant(s) response to be fully responsive and to provide for a clear record must specifically point out how the language of the claims patentably distinguishes them from the references, both those references applied in the objections and rejections and those references cited in view of the state of the art in accordance with 37 CFR 1.111 (a), (b) and (c).

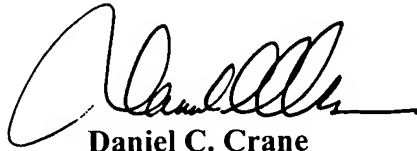
#### **INQUIRIES**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D. Crane whose telephone number is (571) 272-4516. The examiner's office hours are 6:30AM-5:00PM, Tuesday through Friday. The examiner's supervisor, Mr. Derris Banks, can be reached at (571) 272-4419.

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Documents related to the instant application may be submitted by facsimile transmission at all times to Fax number (703) 872-9306. Applicant(s) is(are) reminded to clearly mark any transmission as "DRAFT" if it is not to be considered as an official response. The Examiner's Fax number is (571) 273-4416.

DCCrane  
April 22, 2005

A handwritten signature in black ink, appearing to read 'Daniel C. Crane', with a stylized, flowing script.

**Daniel C. Crane**  
Primary Patent Examiner  
Group Art Unit 3725